

**From:** [Eoc, Epahq](#)  
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## **EOC Spot Report: Region 6, Post-Tropical Cyclone Harvey - Update #16**

**U.S. Environmental Protection Agency**  
**Report as of September 3, 2017 at 1710 EDT**

**Overview:** As of 11:00 ET on Sept 2<sup>nd</sup>, Post-Tropical Cyclone Harvey was located 20 miles west-northwest of Lexington, Kentucky. The National Weather Service (NWS) reports the remnants of Harvey are located 60 miles east northeast of Fort Knox, Kentucky moving at 15 mph. Harvey will continue to move through portions of the Northeast and Mid-Atlantic through the weekend. There are expectations of localized flash flooding and isolated thunderstorms, however, no widespread significant impacts are expected. Major to record flood impacts will continue along the mid and upper Texas coasts and in Louisiana as peak river crests are likely to occur for most of the weekend. Long duration flooding will significantly hamper response and recovery activities. Harvey continues to weaken and is expected to dissipate over the Mid-upper Ohio Valley by the evening of September 3<sup>rd</sup>.

**State, Local and other Federal Agency Actions:** FEMA has activated the NRCC at Level 1 with all Emergency Support Functions (ESFs) and deployed National and several regional Incident Management Assistance Teams (IMATs). FEMA's Region VI RRCC is also at Level 1. The Texas, Louisiana and New Orleans EOCs are at full activation. As of 18:00 on September 2, the Louisiana State EOC will no longer be fully activated. Only those agencies dealing with sheltering will be required to remain at the EOC. All other agencies are to remain on standby. **National Guards have been deployed in Texas and Louisiana.** Additional National Guardsmen from AR, OK, and VA are preparing to deploy between September 4-7.

In Corpus Christi, six oil discharge assessment teams consisting of US Coast Guard and Texas General Land Office are conducting reconnaissance in the area of which two teams are conducting air reconnaissance via helicopters. Eight additional hazard evaluation teams consisting of U.S. Coast Guard (USCG) and Texas Commission on Environmental Quality (TCEQ) and two oil discharge assessment teams consisting of USCG and TCEQ are working in the Houston area. USCG is also conducting orphan container recovery in the area.

On September 1, the Department of Transportation (DOT), Pipeline and Hazardous Materials

Safety Administration (PHMSA) issued a waiver of hazardous materials regulations. The waiver applies to persons conducting operations under the direction of EPA Region 6 within the Hurricane and Tropical Storm disaster and emergency areas of Texas and Louisiana. The waiver is granted to support EPA in taking appropriate response actions.

### **EPA Actions:**

Throughout the weekend, EPA staff assessed public water supplies, wastewater treatment facilities, Risk Management Plan (RMP) and Facility Response Plan (FRP) facilities for damage and immediate ongoing releases. EPA personnel deployments to Austin, Beaumont-Port Arthur, Houston and Corpus Christi will continue throughout the weekend. Personnel will be supporting the Unified Command teams that are identifying and evaluating impacts of the hurricane and floods, as well as coordinating with TCEQ to assist with priority drinking and waste water assessments. EPA is working with TCEQ to issue a statement on the hazards of floodwaters. Assisting drinking water and wastewater facilities in maintaining and/or resuming their operational status remains a high priority.

### **EPA Region 6:**

The Region 6 Emergency Operations Center is currently activated and is working under a limited FEMA Disaster Declaration Mission Assignment (MA). In addition, EPA has received an MA to assist the State of Texas with drinking water, wastewater, and Hazmat recovery operations.

### **Texas**

A Major Disaster Declaration is in effect for 36 counties in Texas.

Region 6 deployed two On-Scene Coordinators (OSC) on August 25 in support of the State through this ESF. One OSC deployed to the FEMA Regional Response Coordination Center in Denton and the second OSC to the State of Texas Operations Center in Austin.

EPA is deploying four teams of On Scene Coordinators and contractors to Beaumont-Port Arthur to coordinate with TCEQ, TGLO, and USCG in responding to releases and spills at facilities. These teams will stage in Houston until weather allows them to enter the Beaumont-Port Arthur area. An EPA Trace Atmospheric Gas Analyzer (TAGA) vehicle is deployed to Corpus Christi. Colorado PHILIS mobile units will be deploying to Corpus Christi. EPA's Portable High-Throughput Integrated Laboratory Identification System (PHILIS) units are en route from Denver to the Corpus Christi area and are anticipated to arrive on September 1st. The mobile laboratory will be used to process environmental samples. A TAGA vehicle is scheduled to arrive in San Antonio by September 4<sup>th</sup>.

On September 1, EPA deployed two container recovery teams to Corpus Christi that will be collecting orphaned containers where hazard evaluations have been completed.

### **Louisiana**

The state of Louisiana is under an Emergency Declaration. To date, the Louisiana Department of Environmental Quality (LDEQ) has not set up its IMT and does not plan to unless something significantly changes. The main focus for Louisiana is supporting individuals evacuating from impacted areas in Texas. EPA continues to monitor the situation in Louisiana and stay in close communication with LDEQ. As of 18:00 CT on September 2<sup>nd</sup>, the Louisiana State EOC discontinued full activation with ESFs 1, 3, 6, 7, 8, and DoD. Only those agencies dealing with sheltering were required to remain at the EOC.

### **Industrial Sources**

On August 31, two explosions were reported at the Arkema Chemical Facility. Arkema is a Risk Management Plan (RMP) facility that manufactures liquid organic peroxides and has sulfur dioxide (anhydrous) and 2-methylpropene present on site. EPA has deployed an On-Scene Coordinator (OSC) to the scene. Four air monitoring teams from EPA, Harris County Pollution Control and Liberty County are conducting monitoring around the exclusion zone.

On September 1<sup>st</sup> at approximately 17:30 ET, an additional trailer reacted resulting in a large fire with significant amounts of black smoke. During the fire, EPA's ground air monitoring results outside of the exclusion zone were below levels of health concern. The fire subsided at approximately 18:30 CT. Unified Command determined that access to the facility is unsafe and a 1.5-mile evacuation radius would remain in effect until further notice.

EPA's Airborne Spectral Photometric Environmental Collection Technology (ASPECT) aircraft have been making multiple overflights of the Arkema facility. ASPECT has performed 5 overflights with no detections, with the exception for 2 detections of benzoyl peroxide at approximately 5 ppm which is just above the detection limit. Mobile ground air monitoring for pollutants of concern including VOCs, SO<sub>2</sub> and CO. ASPECT is currently conducting an overflight of the most recent fire on September 1<sup>st</sup> and will report additional data related to the plume.

As of Sept 2<sup>nd</sup>, Aerial reconnaissance photos indicated that flood waters within the facility have receded significantly. EPA collected surface water runoff samples downstream of the facility at 4 locations near a residential area. EPA's mobile laboratory analyzed the samples and will continue to maintain a 24-hr presence with air monitoring capabilities. Unified Command at the Arkema site continues to coordinate with the EPA Region 6 Environmental Unit to determine locations on the site where flood water samples should be collected.

Harris County Office of Homeland Security and Emergency Management is conducting air monitoring in the area. Four air monitoring teams from EPA, Harris County Pollution Control and Liberty County are conducting monitoring around the exclusion zone. So far, all readings are non-detect at ground levels. The Harris County Fire Department is maintaining a 1.5-mile evacuation order around the facility. Poison Control Centers are set up in TX to help citizens who have health concern questions concerning the Arkema facility or other flood-related health questions.

R6 OSC, contacted ASPECT ground control and stated that the Sheriff overflight reported that yellow material, believed to be organic peroxides was seeping from the six trailers on the ground.

On September 2<sup>nd</sup> at 15:00 CT, ASPECT observed white smoke emitting from one of the remaining 6 trailers of peroxide. However, no further ignition of the material has occurred. A series of passes had measurable chemical detections consistent with peroxide above the detection limit (about 5 ppm) downwind (south and west) from the trailers. At 21:00 CT, ASPECT did not show chemical detections above the detection limits. Ground level air monitoring outside the 1.5-mile exclusion zone indicated non-detect for the contaminants of concern.

EPA's aerial reconnaissance aircraft continues to fly over the Arkema facility about every 10 to 15 minutes. EPA continues to monitor air quality. A 1.5-mile evacuation zone and Temporary Flight Restriction remains in effect.

A spill of between 200 and 1,500 barrels of crude oil was reported by the Denbury Onshore LLC facility near Friendswood, TX. Some of the fuel flowed into an underground storm drainage system that empties into tributaries of Cedar Creek. The Denbury facility reported that most of the oil remained on its property. A second spill was reported by Linn Operating LLC and involved an unknown amount of oil from a battery of storage tanks in Montgomery County. The spills are attributed to flooding from Harvey.

EPA is working with TCEQ to contact industrial sources within the impacted area to determine their operational status and what support can be provided with the monitoring of the

start-up of industrial sources along the coast of Texas.

### **Drinking Water / Wastewater Assessments**

The Region 6 Drinking and Wastewater Team mobilized on August 30 to Corpus Christi to assist with drinking water and waste water field assessments. On September 2, Region 6 sent four Drinking Water/Wastewater Assessment Teams to Corpus Christi and four Drinking Water/Wastewater Assessment Teams to Houston.

EPA is working closely with the TCEQ to contact drinking water and waste water facilities to determine their needs and operational status. TCEQ reported that 61 drinking water systems and 30 waste water systems are inoperable, and Boil Water Notices (BWN) are in place for 166 water systems. The Louisiana Department of Health (LDH) reported that three water systems are on a Boil Water Advisory, and one water system is currently out of service in Calcasieu Parish.

On September 2, 2017, the City of Beaumont Water Treatment Facilities reported to TCEQ that the groundwater plant remains off-line due to flooding conditions. The surface water treatment plant (SWP) is producing 20 million gallons per day (MGD) as of 9:00 am this morning. Water is being sent to limited sections of distribution as this time due to the inability to maintain pressure. Operators are slowly opening main distribution lines and determine where pressure is being lost so repairs can be made. This will be a slow, methodical process to bring the entire system up to desired pressure. The raw water pumps are estimated to remain out of service for 2-3 weeks. Crews are currently on-site laying additional pipe and installing additional pumps to bring raw water directly from the Neches River into the SWTP. The estimated demand will be above 20 MGD. It is estimated that the full capacity will take longer to determine due to leaks in the distribution system. The elevated storage tanks and groundwater tanks are mostly full. The City of Beaumont will be on a boil water notice when it goes on-line. The City has their Emergency Operations Center (EOC) fully functional and is coordinating efforts to make repairs and acquire chemicals and materials for both short-term and long-term.

### **EPA Laboratory / Analytical Services**

The Houston laboratory is reporting that they will be closed until September 5. The laboratory and office buildings are not damaged. EPA has back up capabilities for laboratory services should the Houston facility remain closed.

### **Data Management**

Two National Data Team members have been deployed. Region 6 will provide technical support to state regulatory agencies both at the GLO and TCEQ to gather data and information in Response Manager, a systemized response data management system.

### **Communications**

On September 1, EPA activated the Crisis Communication Plan to ensure rapid response to providing coordinated, accurate, up-to-date information regarding its field activities. Under a FEMA MA, EPA deployed a Public Affairs Officer to the ESF-15 FEMA Joint Information Center in Austin. The EPA Public Information Unit in Dallas is fully operational and supported by a Public Information Assistance Team (PIAT). An EPA PIO is also in Corpus Christi to support operations.

### **Superfund NPL Sites**

EPA has conducted Rapid Response Assessments at the 41 Superfund sites in the impacted areas using aerial images as well as direct contact with companies who are responsible for on-going cleanup activities. EPA has determined that 28 Superfund sites in the area do not show damage or excessive flooding associated with Harvey. EPA determined that 13 sites have been flooded and/or are experiencing possible damage due to the storm.

### **Refineries/Fuel Waivers**

EPA continues to receive and approve, as appropriate, fuel waiver requests. On September 1<sup>st</sup>, four No Action Assurance (NAA) letters were signed by EPA, to help address fuel shortages. NAAs will help expedite the distribution of existing gasoline supplies in both Texas and Louisiana while the refineries work to re-start and resume normal operations. For each NAA, EPA will exercise discretion not to pursue enforcement for violations of the regulations identified in the NAAs. Each NAA is effective for two weeks, or until September 15<sup>th</sup>. It is anticipated that these NAAs will allow for the immediate distribution in Texas of 10 million or more gallons of gasoline to consumers.

### **EPA Office of Emergency Management (OEM):**

The HQ EOC activated on August 28 and is at Level 1 operations. The HQ EOC is coordinating on several levels with Region 6 and other Federal Agencies. The HQ EOC has deployed personnel to the FEMA National Response Coordination Center (NRCC) to staff the ESF #10 Desk Watch. The HQ EOC has transitioned to a Daily Management Report that will capture response activities in greater detail.

### **EPA Office of Enforcement and Compliance Assurance (OECA)**

EPA's Criminal Investigation Division (CID) is sending 25 special agents as a Quick Reaction Team (QRT) to south TX to support the response to Harvey. As of September 2, the EPA CID QRT is enroute to the affected area for at least 7 days. The response is managed as part of ESF-13.

### **Media Interest: High**

<http://www.nhc.noaa.gov/>

[https://www.washingtonpost.com/national/energy-environment/the-latest-beaumont-reveals-few-details-about-water-plans/2017/09/01/e2cbbd4e-8f72-11e7-9c53-6a169beb0953\\_story.html?utm\\_term=.7f2a36091177](https://www.washingtonpost.com/national/energy-environment/the-latest-beaumont-reveals-few-details-about-water-plans/2017/09/01/e2cbbd4e-8f72-11e7-9c53-6a169beb0953_story.html?utm_term=.7f2a36091177)

<https://apnews.com/27796dd13b9549b0ac76aded58a15122>

<https://www.nytimes.com/2017/09/02/us/harvey-victims-death-toll.html?action=click&module=Top%20Stories&pgtype=Homepage>

**Note: The HQ EOC will continue to monitor and provide updates as needed**

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